

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

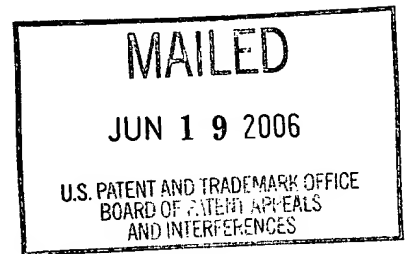
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex Parte ROBERT A. WIEDEMAN and PRASHANT V. WAKNIS

Appeal No. 2006-1221
Application No. 09/846,995

ON BRIEF



Before KRASS, JERRY SMITH and BLANKENSHIP, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-6, 8-15, 17-24, and 26-31. Claims 7, 16, and 25 have been cancelled. Claims 32-34 have been allowed.

The disclosed invention pertains to a low performance warning system and method for mobile satellite service user terminals.

Representative claim 1 is reproduced as follows:

A mobile satellite telecommunications system, comprising:

- at least one user terminal;
- at least one satellite in earth orbit; and

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- at least one gateway bidirectionally coupled to a data communications network;
- said user terminal comprising a controller responsive to at least one criterion having been met for activating an indicator for informing a user of a potential for reduced user terminal performance.

The examiner relies on the following references:

Redden et al.	(Redden)	5,490,087	Feb. 6, 1996
Arrington, Jr. et al.	(Arrington)	5,918,176	Jun. 29, 1999
Rydbeck et al.	(Rydbeck)	5,930,718	Jul. 27, 1999
Maveddat et al.	(Maveddat)	6,070,073	May 30, 2000

The following rejections are on appeal before us:

1. Claims 1, 10, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Maveddat in view of Rydbeck.

2. Claims 2-6, 8, 9, 11-15, 17, 18, 20-24, and 26-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Maveddat in view of Rydbeck, and further in view of Arrington and Redden.

Rather than repeat the arguments of Appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our

decision, the Appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon by the examiner does support the examiner's rejections of claims 1, 2, 9, 10, 11, 18-20, 27, 29, and 31 but does not support the examiner's rejections of claims 3-6, 8, 12-15, 17, 21-24, 26, 28, and 30. Accordingly, we affirm-in-part.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). The examiner must articulate reasons for the examiner's decision. In re Lee, 277 F.3d 1338, 1342, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). In particular, the examiner must show that there is a teaching, motivation, or suggestion of a motivation to combine references relied on as evidence of obviousness. Id. at 1343. The examiner cannot simply reach conclusions based on the examiner's own understanding or experience - or on his or her assessment of what would be basic knowledge or common sense. Rather, the examiner must point to some concrete evidence in the record in support of these findings. In re Zurko, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). Thus the examiner must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the examiner's conclusion. However, a suggestion, teaching, or motivation to

combine the relevant prior art teachings does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. In re Kahn, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) citing In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313 (Fed. Cir. 2000). See also In re Thrift, 298 F. 3d 1357, 1363, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR § 41.37(c)(1)(vii)(2004)].

We consider the obviousness of the following logical groups of claims, as argued separately by Appellants:

- GROUP I, claims 1, 10, and 19.
- GROUP II, claims 2-6, 8-9, 11-15, 17, 18, 20-24, and 26-31.

GROUP I, claims 1, 10, and 19

We consider first the examiner's rejection of claims 1, 10, and 19 that stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Maveddat in view of Rydbeck. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will consider independent claim 1 as the representative claim for this rejection.

The examiner relies upon Maveddat as teaching all the elements of the claimed invention except the limitation of "activating an indicator." For independent claims 1, 10, and 19, the examiner relies upon Rydbeck as teaching "activating an indicator" that would allow "the user to be notified of low link margin" [answer, page 3].

I. Appellants argue that nowhere in Maveddat is there suggested, taught or implied that LEOs, MEOS or LEOS and MEOS in conjunction with GEOS may be employed in the system of the instant invention which activates an indication for informing a user of potential reduced user terminal performance [reply brief, page 3].

The reply brief was noted by the examiner. We note that the instant claims are silent with respect to the argued limitations of LEOS (Low Earth Orbit Satellite), MEOS (Medium Earth Orbit Satellite), or LEOS and MEOS in conjunction with GEOS (Geo-stationary Earth Orbit Satellite).

Limitations appearing in the specification, but not recited in the claim, are not read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. In re Van Geuns, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993). Accordingly, we find that Appellants are impermissibly reading limitations from the specification into the claims to avoid the prior art.

II. Appellants argue that Maveddat does not teach, suggest, or imply that there is an indication of potential reduced user terminal performance, as claimed, because Maveddat is exclusively concerned with and directed to outages which are predictable [reply brief, page 4, brief page 5].

The examiner responds that an outage is a reduced performance situation because the terminal's performance is reduced to not working at all [answer, page 9].

We agree with the examiner that an outage is a reduced performance situation. Maveddat teaches that the SMS message transmitted to mobile subscriber 106 via processing system 118 is generated by intelligent peripheral 116 that “determines when the event will occur using an automatic forecasting algorithm” [col. 8, lines 38-53]. Maveddat explicitly discloses: “The SMS message then indicates that an outage event will occur at a certain point in time” [col. 8, line 52]. We find that the broad language of the claim (i.e., informing a user of a potential for reduced user terminal performance) clearly reads upon Maveddat's disclosure of indicating to the user (i.e., with an SMS message) that an outage “will occur at a

certain point in time” [col. 8, line 52]. Because an outage clearly results in “reduced user terminal performance,” we find that Maveddat’s SMS message does inform a user of a potential for reduced user performance, as claimed.

III. Appellants argue that Rydbeck does not teach a controller responsive to at least one criteria having been met for activating an indicator for informing the user of a potential for reduced user terminal performance [reply brief, page 4, brief, page 5, ¶4 through page 6, ¶4].

The examiner responds that he did not rely upon Rydbeck to teach the claimed controller and that Rydbeck was only used to show that it is obvious to have an indicator on a mobile device to indicate a condition of the device [answer, page 9]. The examiner also notes that the argued claim limitations are much broader than the description in the disclosure, and as a result the claims do read upon Maveddat [answer, page 8]. The examiner observes that mobile phones have display controllers or indicator controllers that activate the displays or indicators upon receiving a signal [answer, page 8].

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Merck & Co., Inc., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986). We agree with the examiner for essentially the same reasons argued in the answer [pages 8-9]. We note that the examiner’s rejections of claims 1, 10, and 19 rely upon Maveddat (and not Rydbeck) for the teaching of the claimed controller: “Maveddat discloses said user terminal comprising a controller responsive to at least one criterion having been met for activating a message for informing a user of a potential for reduced user terminal performance” [answer, page 3].

Maveddat teaches when an outage event is triggered, a short SMS message is sent to all impacted subscribers [col. 8, line 49]. Maveddat explicitly discloses: “The SMS message then indicates that an outage event will occur at a certain point in time” [col. 8, line 52]. We therefore find that Maveddat’s SMS message clearly informs a user of a potential for reduced user performance, as claimed.

Maveddat teaches that the SMS message transmitted to mobile subscriber 106 via processing system 118 is generated by intelligent peripheral 116 that “determines when the event will occur using an automatic forecasting algorithm” [col. 8, lines 38-53].

However, we agree with the examiner that a broad but reasonable construction of the claim language (i.e., “responsive to at least one criterion having been met for activating an indicator for informing a user of a potential for reduced user terminal performance”) reads upon the inherent controller function performed by the mobile subscriber 106 handset (i.e., user terminal) that activates (i.e., displays) a message to mobile subscriber 106.

IV. Appellants argue that there is no suggestion or motivation to combine Maveddat with Rydbeck.

In the rejection of claims 1, 10, and 19, the examiner asserts that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Maveddat, and have it activate an indicator, as taught by Rydbeck, thus allowing the user to be notified of low link margin” [answer, page 4].

There must be a teaching or suggestion within the prior art, within the nature of the problem to be solved, or within the general knowledge of a person of ordinary skill in the

field of the invention, to look to particular sources, to select particular elements, and to combine them as combined by the inventor. Ruiz v. A.B. Chance Co., 234 F.3d 654, 665, 57 USPQ2d 1161, 1167 (Fed. Cir. 2000).

We note that “link margin” is a term of art that specifies the general quality of a wireless communication link, particularly in a satellite system having mobile subscriber units [see e.g., Arrington, col. 1, lines 19-23, Rydbeck, col. 5, lines 35-45]. A low “link margin” may result as a function of a number of variables, such as variations in power level, variations in antenna orientation, modulation techniques, and buildings and other physical obstructions to satellite communication signals [see e.g., Rydbeck, col. 5, lines 37-45. Arrington. col. 1, line 21].

The motivation the examiner relies upon is found within the Rydbeck reference itself. As pointed out by the examiner, Rydbeck discloses the general link margin problem [col. 1, lines 18-44], and further states that the primary objective is to “provide a mobile radio telephone which generates a signal to alert the user thereof when a message is received other than through a normal [i.e., low-power] paging channel” [col. 1, lines 61-65]. Rydbeck discloses that the ability of the mobile satellite phone 16 to obtain synchronization to a normal [i.e., low-power] paging channel 20 depends on the physical location of mobile satellite phone 16, as well as the orientation of antenna 32 [col. 6, lines 58-61]. The alternative paging channel 22 [col. 6, line 8] is a high power signaling channel that is used to alert the user that “some remedial action on his part is required to obtain synchronization to such normal [low-power] paging channel 20, such as reorienting antenna 32 into a favorable

position or moving mobile satellite phone 16 adjacent the window of a building” [col. 7, lines 52-65]. Because Maveddat is also concerned with alerting the user of some type of link margin problem (e.g., sun transit outages, Maveddat, col. 3, lines 8-10), we agree with the examiner that one of ordinary skill in the art would find adequate motivation to combine the references in the manner suggested by the examiner.

V. Appellants argue that Maveddat and Rydbeck are non-analogous references [brief, page 6, reply brief, page 5].

The examiner responds that Maveddat and Rydbeck are directed to analogous systems because Maveddat uses a message to inform the user that there is an impending condition that will cause reduced performance and Rydbeck is directed to an indicator that informs the user when they are in “shadowed” areas where signal strength will be low [answer, page 10].

Whether a reference in the prior art is “analogous” is a question of fact. In re Clay, 966 F.2d 656, 658-9, 23 USPQ2d 1058 (Fed. Cir. 1992), citing Panduit Corp. v. Dennison Mfg., 810 F.2d 1561, 1568 n.9, 1 USPQ2d 1593, 1597 n.9 (Fed. Cir.), cert. denied, 481 U.S. 1052 (1987). The Court of Appeals for the Federal Circuit has set forth two criteria for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. In re Kahn, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), citing In re Oetiker, 977 F.2d 1443, 1447, 24 USPQ2d 1443, 1445-6 (Fed. Cir. 1992). See also In re Bigio, 381 F.3d 1320, 1325, 72 USPQ2d 1209, 1212

(Fed. Cir. 2004), and In re Clay, *supra*, at 1060, citing In re Deminski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986).

Maveddat teaches a communication system and method for notification and call routing in a mobile satellite network [see e.g., summary of the invention, col. 3]. Rydbeck teaches an apparatus and method for transmitting and receiving a signaling message in a communication system that includes, in one embodiment, a satellite phone 18 and a mobile satellite phone 17 [see fig. 1, also col. 5, line 24]. We find that Maveddat and Rydbeck are from the same field of endeavor, specifically, the satellite telephony art, even though each reference is directed to solving a different problem in the context of a particular mobile satellite telephone system. Accordingly, we agree with the examiner that the references are analogous and therefore combinable in the manner set forth by the examiner.

For at least the aforementioned reasons, we will sustain the examiner's rejections of claims 1, 10, and 19.

GROUP II, claims 2-6, 8-9, 11-15, 17, 18, 20-24, 26-31

We now consider the examiner's rejection of claims 2-6, 8-9, 11-15, 17, 18, 20-24, 26-31 that stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Maveddat in view of Rydbeck, and further in view of Arrington and Redden.

The examiner acknowledges that Maveddat and Rydbeck do not specifically disclose a several coverage satellite system where the link margin is based upon diversity transmission [answer, page 5]. The examiner states that Arrington shows coverage by several satellites and a report of link margin and Redden discloses diversity transmission and an outage report

[answer, page 5]. The examiner asserts that it would have been obvious to one of ordinary skill in the art to modify the invention of Maveddat and Rydbeck, and have a “several coverage satellite system, where diversity transmission from the satellites [is] such that the link margin is based on the diversity transmission, and link outage report, as taught by Arrington and Redden, thus allowing the reporting [to] be done for mobiles in fading environments” [answer, page 5].

VI. Appellants argue the instant claimed system is “one of user terminal to satellite, user terminal to satellite in a handoff depending on satellite visibility, whereas in the case of Arrington and Redden it is user terminal to satellite to satellite to satellite to destination, clearly nonanalogous and not properly combinable to reject the instant claims” [appeal brief, page 10]. In the reply brief Appellants further argue that Arrington and Redden are non-analogous references (with respect Maveddat in view of Rydbeck) as both Arrington and Redden are directed to the Iridium satellite system which does not employ at least one gateway bidirectionally coupled to a data communication network nor a controller responsive to at least one criterion having been met for activating an indicator for informing a user of a potential for reduced user terminal performance [reply brief, page 7].

The examiner responds that Maveddat and Rydbeck are both directed to the field of satellite systems, and, in particular, to the specific problem of link quality. The examiner asserts: “Arrington shows that in a mobile system more satellites can be used that generate more cell areas and that when a mobile is receiving reduced performance it could handoff to another cell to get better performance along with sending link reports to the system control

centers and mobiles. Redden shows using [a] diversity Satellite system to get better reception” [answer, page 12]. The examiner notes that all four references are directed to satellite systems, and that Maveddat and Rydbeck are directed to problems associated with reduced link performance while Arrington and Redden disclose ways to get better link performance. The examiner concludes that because Arrington and Redden are seen as curing deficiencies in the system taught by Maveddat and Rydbeck, that the four references are properly combined in the rejection under 35 U.S.C. 103. [answer, page 12].

We agree with the examiner that the four references are properly combinable for at least the reason of being analogous art. We note that Arrington and Redden (like Maveddat and Rydbeck) are directed to the same field of endeavor, i.e., the satellite telephony art. Accordingly, we shall sustain the examiner’s rejections of claims 2, 9, 11, 18, 20, 27, 29, and 31. With respect to claims 9, 18, and 27, we note that Rydbeck explicitly teaches the claimed visual, tactile, and audible indicators at col. 3, lines 11-15, and also at col. 7, lines 43-50. With respect to claim 29, Maveddat inherently teaches a determination is made at a gateway when calls are rerouted from Gateway A to Gateway B for the duration of an outage [col. 9, lines 1-22]. Likewise, dependent claims 2, 11, and 20 read upon the teaching of Maveddat where “outages may be due to maintenance or repair,” whereby at least one satellite becomes temporarily unavailable due to ground station repairs [col. 3, lines 10-11], this situation also indicating a potential for a dropped call, as recited in dependent claim 31.

However, we will not sustain the examiners rejection of dependent claims 3-6, 8, 12-15, 17, 21-24, 26, 28, and 30. We note that the examiner has failed to point out where the

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specific limitations for claims 3-6, 8, 12-15, 17, 21-24, 26, 28, and 30 are to be found in the references. We can find no teaching within the cited references of the specific limitations recited in these claims.




Lastly, we bring to the examiner's attention a 35 U.S.C. §112, second paragraph antecedent basis problem created by the language "the at least one criterion" as recited within allowed claim 34.

In summary, we have sustained the examiner's rejections with respect to claims 1, 2, 9-11, 18-20, 27, 29, and 31, but we have not sustained the rejections with respect to claims 3-6, 8, 12-15, 17, 21-24, 26, 28 and 30. Accordingly, the decision of the examiner rejecting claims 1-6, 8-15, 17-24, and 26-31 is affirmed-in-part.

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No time period for taking any subsequent action in connection with this
appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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Administrative Patent Judge)	
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JERRY SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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